AMENDMENTS TO THE CLAIMS

1-24. (Cancelled).

25. (New) A polycation bioconjugate, comprising:

one or more carrier molecules having free α-amino groups, and one or more enhancer or connecting molecules, wherein the polycation bioconjugate has the general formula (I)

$$H[HN\text{-}CH_2\text{-}(CH_2)_m\text{-}CH\text{-}CO]_rOH \qquad (I)$$
$$|$$
$$[(i)Mx] * [(k)Mx] - NH$$

wherein

"r" is a mean value between 20 and 400 that designates the number of diaminomonocarbonic acyl group monomers;

"m" = 0, 1, 2, 3, . . . ;

[(k)Mx] designates enhancer molecules and/or connecting molecules linked by covalent (=k) bonds to a carrier molecule;

[(i)Mx] designates enhancer molecules linked by ionic (=i) bonds to a carrier molecule, wherein the Mx functional groups may be the same or different, and the enhancer molecules can be linked directly and/or indirectly, through a connecting molecule, to the carrier molecule, and wherein when both [(k)Mx] and [(i)Mx] occur within the same polycation bioconjugate [(i)Mx] * [(k)Mx] is symbolized by [(k/i)Mx];

the carrier molecules are of the same configuration (either D- or L-), and the individual monomers are not linked together by their amino groups in the α-positions, and are linked together by amino groups in other positions according to the value of m, wherein the carrier molecules have a general formula (I/a):

$$H[HN\text{-}CH_2\text{-}(CH_2)_m\text{-}CH\text{-}CO]_rOH \qquad (I/a)$$
$$|$$
$$NH_2$$
(free α-amino group);

wherein [(k)Mx] = $[(-)Cx_j]p_2$ and at least one carrier molecule is linked with one or more connecting molecules $[(-)Cx_j]$ of anionic character, wherein the Cx_j molecules may be the same

or different, and are selected from the group consisting of dicarbonic acids, tricarbonic acids, carbohydrates, amino acids, and peptide chain elongators;

wherein

"(-)Cx" in "[(-)Cx_j]p_2" designates (-)Cx connecting molecules of anionic character of different ("x") kind linked to at least one carrier molecule of general formula (I/a) by covalent bonds;

"j" indicates whether the (-)Cx connecting molecules are identical (j=1) or different according to the number "j" (j = 2, 3, . . .); and

"p_2" indicates a degree of saturation in % of a carrier molecule of general formula (I/a) by [(-)Cx_j] connecting molecules of exclusively anionic character, p_2 having a value which is > 0 and <100.

26. (New) The polycation bioconjugate of claim 25, wherein at least one carrier molecule is linked by an ionic bond with an enhancer molecule of cationic character.

27. (New) A polycation bioconjugate, comprising:

one or more carrier molecules having free α-amino groups, and one or more enhancer or connecting molecules, wherein the polycation bioconjugate has the general formula (I)

$$\begin{array}{l} H[HN\text{-}CH_2\text{-}(CH_2)_m\text{-}\underset{|}{C}H\text{-}CO]_rOH \\ \quad\quad\quad [(i)Mx] * [(k)Mx] - NH \end{array} \qquad (I)$$

wherein

"r" is a mean value between 20 and 400 that designates the number of diaminomonocarbonic acyl group monomers;

"m" = 0, 1, 2, 3, . . . ;

[(k)Mx] designates enhancer molecules and/or connecting molecules linked by covalent (=k) bonds to a carrier molecule;

[(i)Mx] designates enhancer molecules linked by ionic (=i) bonds to a carrier molecule, wherein the Mx functional groups may be the same or different, and the enhancer molecules can be linked directly and/or indirectly, through a connecting molecule, to the carrier molecule, and wherein when both [(k)Mx] and [(i)Mx] occur within the same polycation bioconjugate [(i)Mx] * [(k)Mx] is symbolized by [(k/i)Mx];

the carrier molecules are of the same configuration (either D- or L-), and the individual monomers are not linked together by their amino groups in the α-positions, and are linked together by amino groups in other positions according to the value of m, wherein the carrier molecules have a general formula (I/a):

$$H[HN\text{-}CH_2\text{-}(CH_2)_m\text{-}CH\text{-}CO]_r OH \qquad (I/a)$$

$$|$$

$$NH_2$$

(free α-amino group);

wherein [(k)Mx] =

$[Ex_i]_{p1}$ and/or

$[(-)Cx_j]_{p2}$ and/or

$[Cx_{ck}\text{-}Ex_{ck}]_{p3}$

and at least one carrier molecule is linked with at least two of $[Ex_i]_{p1}$, $[(-)Cx_j]_{p2}$ and $[Cx_{ck}\text{-}Ex_{ck}]_{p3}$, such that [(k)Mx] =

$[Ex_i]_{p1} + [(-)Cx_j]_{p2}$ or

$[Ex_i]_{p1} + [Cx_{ck}\text{-}Ex_{ck}]_{p3}$ or

$[Cx_{ck}\text{-}Ex_{ck}]_{p3} + [(-)Cx_j]_{p2}$ or

$[Ex_i]_{p1} + [Cx_{ck}\text{-}Ex_{ck}]_{p3} + [(-)Cx_j]_{p2}$,

wherein

"Ex" in "$[Ex_i]_{p1}$" designates the Ex enhancer molecules of different ("x") kind linked to at least one carrier molecule of general formula (I/a) by covalent bonds;

"i" indicates whether the Ex enhancer molecules are identical ones (i=1) or different according to the number "i" (i = 2, 3, . . .);

"p_1" indicates a degree of saturation in % of a carrier molecule of general formula (I/a) by $[Ex_i]$ enhancer molecules;

"(-)Cx" in "$[(-)Cx_j]p_2$" designates (-)Cx connecting molecules of anionic character of different ("x") kind linked to at least one carrier molecule of general formula (I/a) by covalent bonds;

"j" indicates whether the (-)Cx connecting molecules are identical (j=1) or different according to the number "j" (j = 2, 3, . . .);

"p_2" indicates a degree of saturation in % of a carrier molecule of general formula (I/a) by $[(-)Cx_j]$ connecting molecules of exclusively anionic character;

"Cx-Ex" in "$[Cx_{ck}\text{-}Ex_{ck}]_{p3}$" designates the Ex enhancer molecules of different ("x") kind linked to at least one carrier molecule of general formula (I/a) by covalent bonds indirectly through Cx connecting molecules of different ("x") kind linked to at least one carrier molecule of general formula (I/a);

"ck" indicates whether the Cx connecting molecules are identical (ck = 1) or of different kind (ck = 2, 3, . . .);

"ek" indicates whether the Ex enhancer molecules are identical (ek = 1) or of different kind (ek = 2, 3, . . .);

"p_3" indicates a degree of saturation in % of a carrier molecule of general formula (I/a) by $[Ex_{ck}]$ enhancer molecules linked indirectly to Cx_{ck} connecting molecules;

"p_1" + "p_2" + "p_3" is > 0 and ≤ 100, and at least two of "p_1," "p_2" and "p_3" are greater than 0; and

the Ex molecules in $[Ex_i]$ and the (-)Cx molecules in $[(-)Cx_j]$ are the same or different than the Ex and Cx molecules in $[Cx_{ck}\text{-}Ex_{ck}]$.

28. (New) A polycation bioconjugate, comprising:

one or more carrier molecules having free α-amino groups, and one or more enhancer or connecting molecules, wherein the polycation bioconjugate has the general formula (I)

$$H[HN\text{-}CH_2\text{-}(CH_2)_m\text{-}\underset{\displaystyle [(i)Mx] * [(k)Mx]\text{ - }NH}{\underset{|}{CH}}\text{-}CO]_rOH \qquad (I)$$

wherein

"r" is a mean value between 20 and 400 that designates the number of diaminomonocarbonic acyl group monomers;

"m" = 0, 1, 2, 3, . . . ;

[(k)Mx] designates enhancer molecules and/or connecting molecules linked by covalent (=k) bonds to a carrier molecule;

[(i)Mx] designates enhancer molecules linked by ionic (=i) bonds to a carrier molecule, wherein the Mx functional groups may be the same or different, and the enhancer molecules can be linked directly and/or indirectly, through a connecting molecule, to the carrier molecule, and wherein when both [(k)Mx] and [(i)Mx] occur within the same polycation bioconjugate [(i)Mx] * [(k)Mx] is symbolized by [(k/i)Mx];

the carrier molecules are of the same configuration (either D- or L-), and the individual monomers are not linked together by their amino groups in the α-positions, and are linked together by amino groups in other positions according to the value of m, wherein the carrier molecules have a general formula (I/a):

$$H[HN\text{-}CH_2\text{-}(CH_2)_m\text{-}CH\text{-}CO]_rOH \qquad (I/a)$$

$$|$$

$$NH_2$$

(free α-amino group);

wherein $[(i)Mx] = [(-)Ax_s]_t$ and at least one carrier molecule is linked with one or more enhancer molecules $[(-)Ax_s]$ of anionic character, wherein the Ax_s molecules may be the same or different,

wherein

"Ax" in "$[(-)Ax_s]_t$" designates the (-)Ax enhancer molecules of anionic character of same or different ("x") kind linked to at least one carrier molecule of general formula (I/a) by ionic bonds;

"s" indicates whether the Ax enhancer molecules are identical (s = 1) or of different kind (s = 2, 3, . . .); and

"t" indicates a degree of saturation in % of a carrier molecule of general formula (I/a) by $[(-)Ax_s]$ enhancer molecules, t having a value which is > 0 and ≤ 100.

29. (New) The polycation bioconjugate of claim 25, wherein $[(k/i)Mx] = [(-)Cx_j]_{p2} * [(+)Kx_u]_z$,

wherein

"(+)Kx" in "$[(+)Kx_u]_z$" designates the (+)Kx enhancer molecules of cationic character of same or different ("x") kind linked to at least one carrier molecule of general formula (I/a) by ionic bonds indirectly through the $[(-)Cx_j]_{p2}$ connecting molecules of anionic character;

"u" indicates whether the (+)Kx enhancer molecules are identical (u = 1) or of different kind (u = 2, 3, . . .); and

"z" indicates a degree of saturation in % of a carrier molecule of general formula (I/a) by $[(+)Kx_u]$ enhancer molecules, z having a value which is > 0 and ≤ 100.

30. (New) The polycation bioconjugate of claim 29, wherein [(k/i)Mx] = $\{[(-)Cx_j]_{p2} * [(+)Kx_u]_z\} * [(-)Ax_s]_t$,

wherein

"Ax" in "$[(-)Ax_s]_t$" designates the (-)Ax enhancer molecules of anionic character of same or different ("x") kind linked to at least one carrier molecule of general formula (I/a) by ionic bonds;

"s" indicates whether the Ax enhancer molecules are identical (s = 1) or of different kind (s = 2, 3, . . .); and

"t" indicates a degree of saturation in % of a carrier molecule of general formula (I/a) by $[(-)Ax_s]$ enhancer molecules, t having a value which is > 0 and ≤ 100.

31. (New) The polycation bioconjugate of claim 27, wherein [(k/i)Mx] =

$[Ex_i]_{p1} * [(-)Ax_s]_t$ or

$[Cx_{ck}\text{-}Ex_{ck}]_{p3} * [(-)Ax_s]_t$ or

$[Ex_i]_{p1} + [Cx_{ck}\text{-}Ex_{ck}]_{p3} * [(-)Ax_s]_t$,

wherein

"Ax" in "$[(-)Ax_s]_t$" designates the (-)Ax enhancer molecules of anionic character of same or different ("x") kind linked to at least one carrier molecule of general formula (I/a) by ionic bonds;

"s" indicates whether the Ax enhancer molecules are identical (s = 1) or of different kind (s = 2, 3, . . .);

"t" indicates a degree of saturation in % of a carrier molecule of general formula (I/a) by $[(-)Ax_s]$ enhancer molecules; and

"p_1" + "p_3" + "t" is > 0 and ≤ 100, and at least one of "p_1" and "p_3" is greater than 0, and t is greater than zero.

32. (New) The polycation bioconjugate of claim 27, wherein [(k/i)Mx] =

$[Ex_i]_{p1} + \{[(-)Cx_j]_{p2} * [(+)Kx_u]_z\}$ or

$[Cx_{ck}\text{-}Ex_{ck}]_{p3} + \{[(-)Cx_j]_{p2} * [(+)Kx_u]_z\}$ or

$[Ex_i]_{p1} + [Cx_{ck}\text{-}Ex_{ck}]_{p3} + \{[(-)Cx_j]_{p2} * [(+)Kx_u]_z\}$,

wherein

"(+)Kx" in "$[(+)Kx_u]_z$" designates the (+)Kx enhancer molecules of cationic character of same or different ("x") kind linked to at least one carrier molecule of general formula (I/a) by ionic bonds indirectly through the $[(-)Cx_j]_{p2}$ connecting molecules of anionic character;

"u" indicates whether the (+)Kx enhancer molecules are identical (u = 1) or of different kind (u = 2, 3, . . .);

"z" indicates a degree of saturation in % of a carrier molecule of general formula (I/a) by $[(+)Kx_u]$ enhancer molecules; and

"p_1" + "p_3" + "z" is > 0 and ≤ 100, and at least one of "p_1" and "p_3" is greater than 0, and z is greater than zero.

33. (New) The polycation bioconjugate of claim 32, wherein [(k/i)Mx] =

$[Ex_i]_{p1} + \{[(-)Cx_j]_{p2} * [(+)Kx_u]_z * [(-)Ax_s]_t\}$ or

$[Cx_{ck}\text{-}Ex_{ck}]_{p3} + \{[(-)Cx_j]_{p2} * [(+)Kx_u]_z * [(-)Ax_s]_t\}$ or

$[Ex_i]_{p1} + [Cx_{ck}\text{-}Ex_{ck}]_{p3} + \{[(-)Cx_j]_{p2} * [(+)Kx_u]_z * [(-)Ax_s]_t\}$,

wherein

"Ax" in "$[(-)Ax_s]_t$" designates the (-)Ax enhancer molecules of anionic character of same or different ("x") kind linked to at least one carrier molecule of general formula (I/a) by ionic bonds;

"s" indicates whether the Ax enhancer molecules are identical (s = 1) or of different kind (s = 2, 3, . . .);

"t" indicates a degree of saturation in % of a carrier molecule of general formula (I/a) by $[(-)Ax_s]$ enhancer molecules; and

"p_1" + "p_3" + "t" + "z" is > 0 and ≤ 100, and at least one of "p_1" and "p_3" is greater than 0, and t and z are each greater than zero.

34. (New) A polycation bioconjugate, comprising:

one or more carrier molecules having free α-amino groups, and one or more enhancer or connecting molecules, wherein the polycation bioconjugate has the general formula (I)

$$H[HN\text{-}CH_2\text{-}(CH_2)_m\text{-}CH\text{-}CO]_rOH \qquad (I)$$

$$|$$

$$[(i)Mx] * [(k)Mx] - NH$$

wherein

"r" is a mean value between 20 and 400 that designates the number of diaminomonocarbonic acyl group monomers;

"m" = 0, 1, 2, 3, . . . ;

[(k)Mx] designates enhancer molecules and/or connecting molecules linked by covalent (=k) bonds to a carrier molecule;

[(i)Mx] designates enhancer molecules linked by ionic (=i) bonds to a carrier molecule, wherein the Mx functional groups may be the same or different, and the enhancer molecules can be linked directly and/or indirectly, through a connecting molecule, to the carrier molecule, and wherein when both [(k)Mx] and [(i)Mx] occur within the same polycation bioconjugate [(i)Mx] * [(k)Mx] is symbolized by [(k/i)Mx];

and a nucleic acid linked by an ionic bond to at least one carrier molecule.

35. (New) The polycation bioconjugate of claim 25, wherein the bioconjugate comprises at least one enhancer molecule selected from the group consisting of an antiproliferative compound, an antimicrobial compound, an antiviral compound, a nucleic acid, a paramagnetic metal ion, a complex containing a paramagnetic metal ion, an immunomodulant compound, an antibody and fragments and derivatives thereof, a peptide and fragments and derivatives thereof, a protein and fragments and derivatives thereof, and a hormone and fragments and derivatives thereof.

36. (New) The polycation bioconjugate of claim 27, wherein the bioconjugate comprises at least one enhancer molecule selected from the group consisting of an antiproliferative compound, an antimicrobial compound, an antiviral compound, a nucleic acid, a paramagnetic metal ion, a complex containing a paramagnetic metal ion, an immunomodulant compound, an antibody and fragments and derivatives thereof, a peptide and fragments and derivatives thereof, a protein and fragments and derivatives thereof, and a hormone and fragments and derivatives thereof.

37. (New) The polycation bioconjugate of claim 28, wherein the bioconjugate comprises at least one enhancer molecule selected from the group consisting of an antiproliferative compound, an antimicrobial compound, an antiviral compound, a nucleic acid, a paramagnetic

metal ion, a complex containing a paramagnetic metal ion, an immunomodulant compound, an antibody and fragments and derivatives thereof, a peptide and fragments and derivatives thereof, a protein and fragments and derivatives thereof, and a hormone and fragments and derivatives thereof.

38. (New) The polycation bioconjugate of claim 35, wherein the enhancer molecule is a monoclonal antibody having an affinity to a surface antigen of a tumor cell.

39. (New) The polycation bioconjugate of claim 35, wherein the enhancer molecule is a compound having an affinity to a receptor, wherein the receptor is present in a greater ratio on a surface of a tumor cell than on a surface of a non-tumor cell.

40. (New) The polycation bioconjugate of claim 36, wherein the enhancer molecule is a monoclonal antibody having an affinity to a surface antigen of a tumor cell.

41. (New) The polycation bioconjugate of claim 36, wherein the enhancer molecule is a compound having an affinity to a receptor, wherein the receptor is present in a greater ratio on a surface of a tumor cell than on a surface of a non-tumor cell.

42. (New) The polycation bioconjugate of claim 37, wherein the enhancer molecule is a monoclonal antibody having an affinity to a surface antigen of a tumor cell.

43. (New) The polycation bioconjugate of claim 37, wherein the enhancer molecule is a compound having an affinity to a receptor, wherein the receptor is present in a greater ratio on a surface of a tumor cell than on a surface of a non-tumor cell.

44. (New) The polycation bioconjugate of claim 28, wherein Ax is a nucleic acid.